|   | Application No.   | Applicant(s)   |                         |
|---|---|--|-------------------------|
|   |   |  |                         |
| Notice of Allowability  | 09/381,480<br>Examiner  | CHEE, MARK Art Unit  |                         |
|   | LXammer   | Artonit  |                         |
|   | BJ Forman   | 1634   |                         |
| The MAILING DATE of this communication appear All claims being allowable, PROSECUTION ON THE MERITS IS herewith (or previously mailed), a Notice of Allowance (PTOL-85) NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT R of the Office or upon petition by the applicant. See 37 CFR 1.313 | (OR REMAINS) CLOSED in a<br>or other appropriate communing the community of t | his application. If not included<br>iication will be mailed in due course. T | <b>HIS</b><br>nitiative |
| 1. 🛮 This communication is responsive to papers of 22 Septem  | <u>ber 2005</u> .   |  |                         |
| 2. The allowed claim(s) is/are <u>1-15</u> .  |   |  |                         |
| 3. Acknowledgment is made of a claim for foreign priority unexpand a) All b) Some* c) None of the:  |   | <b>(f)</b> .   |                         |
| Certified copies of the priority documents have   |   |  |                         |
| Certified copies of the priority documents have   |   |  |                         |
| <ol><li>Copies of the certified copies of the priority do</li></ol>   | cuments have been received  | in this national stage application from t                                    | ihe                     |
| International Bureau (PCT Rule 17.2(a)).  |   |  |                         |
| * Certified copies not received:  |   |  |                         |
| Applicant has THREE MONTHS FROM THE "MAILING DATE" noted below. Failure to timely comply will result in ABANDONN THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.   | of this communication to file a<br>IENT of this application.  | reply complying with the requirements  | S                       |
| 4. A SUBSTITUTE OATH OR DECLARATION must be subm<br>INFORMAL PATENT APPLICATION (PTO-152) which give  | itted. Note the attached EXAMes reason(s) why the oath or o   | INER'S AMENDMENT or NOTICE OF<br>leclaration is deficient.                   | F                       |
| 5. CORRECTED DRAWINGS ( as "replacement sheets") mus  | st be submitted.  |  |                         |
| (a) ☐ including changes required by the Notice of Draftspers  |   | (PTO-948) attached   |                         |
| 1) hereto or 2) to Paper No./Mail Date  |   | , ,  |                         |
| (b) including changes required by the attached Examiner's Paper No./Mail Date   | s Amendment / Comment or in   | n the Office action of   |                         |
| ldentifying indicia such as the application number (see 37 CFR 1 each sheet. Replacement sheet(s) should be labeled as such in t  | .84(c)) should be written on the<br>he header according to 37 CFR   | drawings in the front (not the back) of 1.121(d).                            |                         |
| 6. DEPOSIT OF and/or INFORMATION about the depo-<br>attached Examiner's comment regarding REQUIREMENT   | sit of BIOLOGICAL MATER<br>FOR THE DEPOSIT OF BIOL  | RIAL must be submitted. Note the OGICAL MATERIAL.                            |                         |
|   |   |  |                         |
| Attachment(s) 1. ☐ Notice of References Cited (PTO-892)   | E   Notice of Info  | amol Detect Application (DTO 450)  |                         |
| <ol> <li>Notice of References Cited (PTO-892)</li> <li>Divide of Draftperson's Patent Drawing Review (PTO-948)</li> </ol>   |   | rmal Patent Application (PTO-152)  |                         |
| 3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/0  | 6. ☐ Interview Sun<br>Paper No./M<br>8) 7 ☐ Evaminer's A  | nmary (P10-413),<br>ail Date<br>mendment/Comment                             |                         |
| Paper No./Mail Date  4. Examiner's Comment Regarding Requirement for Deposit  | , –   | tatement of Reasons for Allowance  |                         |
| of Biological Material  |   |  |                         |
|   | 9. 🗌 Other  | h  |                         |
|   |   | BJ FORMAN, PH.D.<br>PRIMARY EXAMINER   |                         |

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## NOTICE OF ALLOWABILITY

## Status of the Claims

This action is in response to papers filed 22 September 2005 in which claim 1 was amended and the previous rejections were traversed. the amendments have been thoroughly reviewed and entered.

The previous rejections in the Office Action dated 22 June 2005 under 35 U.S.C. 102(e) and obviousness double patenting over U.S. Patent No. 6,228,575 are withdrawn in view of the Applicant's comments on pages 6 and 9-10 of the response. The previous rejections under 35 U.S.C. 103(a) are withdrawn in view of the amendments and comments on page 7 of the response. The previous rejections under obviousness-type double patenting over co-pending application 10/229,319 are withdrawn in view of the fact that the conflicting claims in the 319 application have been canceled.

Applicant's comments and amendments place the claims in condition for allowance.

Claims 1-15 are in condition for allowance.

## **REASONS FOR ALLOWANCE**

The following is an examiner's statement of reasons for allowance:

The claims are drawn to a method of target analysis. The method differs from the prior art in that the instant claims estimate the nucleotide sequence based on relative hybridization, then construct a subsequent array based on that estimation to reestimate the sequence, again based on relative hybridization. In a further embodiment as recited in instant claim 2, subsequent steps are performed until the reestimated sequence is constant between successive cycles. Hence, target analysis is based on relative hybridization, not sequence determination. In contrast, the prior art determines the nucleic acid sequence. Skiena uses algorithms to

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design probes for subsequent hybridizations and sequence determination (Column 6). Other well-known techniques are used to determine sequences e.g. primer extension, Sanger sequencing and etc. However, the prior art does not teach or suggest the instantly claimed sequence estimation and reestimation.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

## Conclusion

Claims 1-15 are allowed.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to BJ Forman whose telephone number is (571) 272-0741. The examiner can normally be reached on 6:00 TO 3:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gary Jones can be reached on (571) 272-0745. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <a href="http://pair-direct.uspto.gov">http://pair-direct.uspto.gov</a>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to (571) 272-0547.

Patent applicants with problems or questions regarding electronic images that can be viewed in the Patent Application Information Retrieval system (PAIR) can now contact the USPTO's Patent Electronic Business Center (Patent EBC) for assistance. Representatives are available to answer your questions daily from 6 am to midnight (EST). The toll free number is (866) 217-9197. When calling please have your application serial or patent number, the type of document you are having an image problem with, the number of pages and the specific nature of the problem. The Patent Electronic Business Center will notify applicants of the resolution of the problem within 5-7 business days. Applicants can also check

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PAIR to confirm that the problem has been corrected. The USPTO's Patent Electronic Business Center is a complete service center supporting all patent business on the Internet. The USPTO's PAIR system provides Internet-based access to patent application status and history information. It also enables applicants to view the scanned images of their own application file folder(s) as well as general patent information available to the public.

For all other customer support, please call the USPTO Call Center (UCC) at 800-786-9199.

BJ Forman, Ph.D. Primary Examiner Art Unit: 1634 December 2, 2005